

Amendments to the Claims:

- 1) (currently amended): A method of filtering data prior to reading a digital watermark that was inserted using a scale to black technique, said method comprising: ~~the steps of~~
first-projecting the color values of each pixel onto a preferred projection axis that is determined by examining the color of the surrounding pixels surrounding each pixel, and by
reading the watermark from the resulting data.

- 2) (currently amended): A system for reading a digital watermark from a digital image which includes ~~consists of~~ a number of pixels, each pixel being defined by a set of numbers representing the color components of the particular pixel, said system comprising:
a filter for calculating the a value of each pixel along a preferred projection axis, the preferred projection axis corresponding to a direction of embedding determined based on color characteristics of at least some pixels associated with each pixel; and
a watermark reader which operates on the values calculated by the filter.

- 3) (currently amended): A method of calculating values that will be used to read a watermark from a digital image, wherein the digital image comprises a plurality of pixels, said method comprising: the steps of:
projecting the color values of each particular pixel to a preferred projection axis, said preferred projection axis being determined by averaging the at least some color values ~~colors~~ of the pixels in an area adjacent to a ~~surrounding~~ said particular pixel; and
providing results of said projecting.
- 4) (currently amended): The method recited in claim 1 wherein the pixels in an area of three by three pixels are ~~is~~ examined to determine the preferred projection axis.
- 5) (currently amended): The method recited in claim 1 wherein said watermark has a particular tile size and wherein ~~said the~~ pixels in an area ~~the size of~~ said tile size are examined to determine the preferred projection axis.
- 6) (currently amended): The system recited in claim 2 wherein said filter examines the pixels in an area of three by three pixels to determine the preferred projection axis.

- 7) (currently amended): The system recited in claim 2 wherein said watermark has a particular tile size and wherein said filter examines ~~the~~ pixels in an area ~~the size of said tile~~ size to determine the preferred projection axis.
- 8) (currently amended): The method recited in claim 3 wherein ~~the~~ pixels in an area of three by three pixels are averaged ~~is examined~~ to determine the preferred projection axis.
- 9) (currently amended): The method recited in claim 3 wherein said watermark has a particular tile size and wherein ~~said the~~ pixels in an area ~~the size of said tile~~ size are averaged ~~examined~~ to determine the preferred projection axis.
- 10) canceled
- 11) (currently amended): A system for reading a digital watermark in an image that comprises ~~consists of~~ a number of pixels each represented by a set of numbers representing different colors, said system comprising: ~~comprising~~, a filter which projects the set of numbers representing color of each pixel onto a preferred projection axis by averaging ~~the~~ color values of ~~said~~ pixels of a particular area, and a watermark reading program for reading said watermark from said preferred projection axis.

12) (currently amended): A system for reading a digital watermark from a color ~~colored~~ image that comprises ~~consists of~~ a number of pixels each having multiple color components, said system comprising: ~~comprising~~, means for filtering the color ~~said digital~~ image to project color ~~the colors~~ components of each pixel to a preferred projection axis, wherein projecting color components is based at least in part on local color content of the color image for an image area that is associated with each pixel; and means for reading the ~~said~~ watermark from the ~~said~~ filtered image.

13) (currently amended): A method of reading a digital watermark from a color ~~colored~~ image that includes ~~consists of~~ a plurality of pixels and which was watermarked using a scale to black watermarking technique, said method comprising: ~~the steps of~~ first-filtering the color ~~said colored~~ image to generate filtered data by projecting the color values of each pixel onto a selected axis that is determined by examining the color of the surrounding pixels; and reading the watermark from the resulting filtered data.

14) (currently amended): A method of reading a digital watermark from a digital image ~~colored image~~ that includes ~~consists of~~ a number of pixels, each pixel of the numbers of pixels ~~pixel~~ being defined by a set of numbers representing the color components, ~~of the particular pixel~~, said method comprising: filtering ~~the value of~~ the set of numbers that represents each pixel by projecting

~~the set of numbers said values~~ to a selected axis, ~~wherein a~~ the direction of said selected axis ~~is being~~ determined by examining the color values of the pixels in an area associated with each surrounding said pixel, and wherein said filtering provides results; and reading said watermark from the results providing by said filtering. ~~values calculated by the filter.~~

15) (currently amended): The method recited in claim 14 wherein said filtering determines the direction of said selected axis for each pixel by examining the values of the pixels in a three by three area surrounding each said pixel.

16) (currently amended): A watermark reading method for reading a watermark that has been inserted into ~~a~~ the luminance value of the pixels of an image by projecting color changes needed to embed the said watermark onto ~~a~~ the luminance axis of each pixel ~~by projecting from an axis from black to the color of the pixel~~, said method comprising:

filtering the said image prior to reading the said watermark by first projecting the color values of each pixel onto a preferred projection axis that is determined by examining the color values of predetermined the surrounding pixels, wherein at least the values are used to determine a direction of the axis; and ~~by~~ reading the watermark from ~~the resulting data~~ associated with a result of said filtering.

17) (currently amended): A method of inserting first and second watermarks in an image comprising: comprising,
inserting a said first watermark ~~watermarks~~ in an said image in a first color direction, wherein the first color direction is determined, at least in part, through consideration of localized color characteristics associated with different sets of pixels in the image; and
inserting a said second watermark in a color direction that is orthogonal to the first color direction, ~~of said first watermark.~~

18) (currently amended): A method of reading two orthogonally inserted watermarks from an image, wherein the image comprises a plurality of pixels,
said method comprising: by first
filtering the said image to project each pixel of the plurality of pixels onto a preferred projection axis, wherein the preferred projection axis is determined at least in part by an the average color of associated the surrounding pixels; and
reading the said first watermark from ~~the resulting data,~~ data resulting from said filtering; and then
projecting each pixel onto an axis that is orthogonal to the said preferred projection axis; and
reading the second watermark from ~~the~~ resulting data.

19) (currently amended): The method recited in claim 17 wherein an the intensity of the said second watermark is lower than an the intensity of the said first watermark.

20) (currently amended): A method of filtering an image containing a digital watermark to generate a set of values from which the ~~said~~ digital watermark can be read, wherein the ~~said~~ digital watermark is ~~having been~~ inserted along a particular color direction, ~~axis~~, said method comprising:
approximating a plurality of color directions that the digital watermark is likely embedded along through analysis of a plurality of local color characteristics of the image; and
searching for the digital watermark in the approximated color directions.
~~projecting the color values of each pixel onto a color axis which approximates the color axis used to embed said watermark in said pixel.~~

21) (new): A method of embedding a digital watermark in an image, wherein the image comprises at least a set of pixels having color values associated therewith, said method comprising:
for each pixel in the set of pixels, determining a color direction associated therewith through reference to at least color characteristics of a plurality of associated pixels; and
embedding components of the digital watermark along color directions determined in said determining step.